



3. A tool for withdrawing a soil sample, said tool comprising a frame member including a portion including spaced vertically extending legs having lower ends, a foot portion fixed to said lower ends of said legs and including a horizontally extending slot defined by a vertically extending wall including a horizontally extending groove, and an abutment surface extending horizontally and located between said legs in upwardly spaced relation from said foot portion.

4. A tool for withdrawing a soil sample, said tool comprising a frame member including an inverted U-shaped guard portion including spaced upright legs having lower ends, a foot portion fixed to said lower ends of said legs, and including an outer perimeter extending laterally beyond said spaced leg portions, a slot defined by a vertically extending wall and including an entry part, and a semi-circular part extending from said entry part and located between said legs, and a groove located in said wall, extending horizontally, and adapted to removably receive a flange at the top end of a hollow member which, when said flange is received in said groove, extends downwardly from said foot portion, which also includes an open lower end, and which has slideable located therein a plunger member extending, in part, above said hollow member and between said spaced legs and having an upper end, and an abutment portion extending horizontally and located between said legs in upwardly spaced relation from said foot portion, and adapted to engage the upper end of the plunger member to maintain the plunger member in a predetermined position relative to the hollow member when the flange is received in said annular groove.

6. A tool for withdrawing a soil sample, said tool comprising a frame member including an inverted U-shaped guard portion including spaced upright legs having lower ends, a foot portion fixed to said lower ends of said legs and including an outer perimeter extending laterally beyond said spaced legs, a slot defined by a vertically extending wall and including an entry part, a semi-circular part extending from said entry part and located between said legs, and a groove located in said wall and extending horizontally, and an abutment portion extending horizontally between said legs in upwardly spaced relation from said foot portion, an elongated hollow cylindrical member adapted to be inserted into the ground, extending downwardly from said foot portion, and including an inner wall, upper and lower ends, and a flange extending horizontally outwardly from said upper end and removably located in said groove, and a plunger member located, in part, between said legs and, in part, for slideable movement within said hollow member and including upper and lower ends, and a piston sealing engaging said inner wall of said hollow member, and a horizontally extending portion at said upper end thereof engageable with said abutment portion of said frame member to prevent upward movement of said plunger member during insertion of said tubular member into the ground.

6<sup>1</sup>. A tool in accordance with Claim <sup>5</sup> wherein said plunger member includes a stem extending downwardly from said upper end thereof and having a cross shaped horizontal cross-section, and vertically extending edges engaging said inner wall of said hollow member, and a cap located at said upper end, fixed to said stem and including said horizontally extending portion.

8. A tool in accordance with Claim 6 wherein said piston resiliently engages said inner wall of said hollow member.

9. A tool in accordance with Claim 6 wherein said frame member includes a horizontal portion extending from and between said legs, and wherein said abutment surface is formed on an abutment member which is adjustably fixed in said horizontal portion.

10. A tool in accordance with Claim 9 wherein said horizontal portion includes a vertically extending threaded bore, and wherein said adjustment member comprises a bolt including a head providing said abutment surface and located below said horizontal portion, and a threaded stem extending upwardly from said head and threadedly engaged in said threaded bore in said horizontal portion.

10<sup>5</sup> 11. A tool in accordance with Claim 6 wherein said cylindrical member includes an axis, and wherein said flange includes a pair of horizontally spaced straight edges, and a pair of opposed circular edges extending from and between said straight edges in concentric relation to said axis of said cylindrical member.

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